

Survey Finds Correlation Between Child Abuse and Antisocial and Suicidal Behaviors Among Teens

Efforts to reduce teen violence and use of alcohol or drugs have met with limited effectiveness, perhaps because most prevention or intervention programs do not address some root causes of these behaviors. A survey of adolescents in Washington reveals that physical and sexual abuse in childhood is associated with suicidal and antisocial behaviors and substance use. These findings have important implications for intervention programs.

The Adolescent Survey

A statewide sample of 4790 adolescents in grades 8, 10, and 12 participated in a 1995 school-based survey jointly conducted by the state departments of Health and Social and Health Services and the Office of the Superintendent of Public Instruction. The adolescents responded to a variety of questions about their experiences and behaviors, including their abuse histories and recent health-risk behaviors.

More than one-quarter of the adolescents reported some type of childhood abuse, including 11% who reported physical abuse, 6% who reported sexual abuse, and 9% who reported combined abuse.

Girls were more likely to report sexual or combined abuse than were boys (Table 1). The study found strong associations between history of childhood abuse and three categories of adolescent problem behaviors: suicidal ideation/behavior, antisocial behavior, and alcohol and drug use.

Suicidal ideation/behavior included four categories: suicidal thoughts, plans, noninjurious attempts, and injurious attempts. The data analyses, which controlled for school grade and gender, revealed that abused students were more likely to report each of these, and the increased risk was greatest for combined abuse and more serious

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Large *Salmonella* Outbreak Traced to Orange Juice

DNA testing confirmed unpasteurized orange juice as the culprit in Washington's largest-ever outbreak of product-related *Salmonella*. More than 85 cases, primarily in King County, have been reported to state health authorities since the weekend of June 19–20, when Children's Hospital and Regional Medical Center reported three cases to Public Health Seattle and King County. California and Oregon also have reported numerous cases.

Epidemiologic investigations and laboratory testing pinpointed unpasteurized juice produced by Sun Orchard of Tempe, Ariz., a wholesale company that sells primarily to restaurants, hotels, and nursing homes. Samples from all 14 of the cases tested by June 29 had DNA that matched the DNA of *Salmonella* in the juice, which prompted an immediate recall of the product. *Salmonella* also was found in unopened containers.

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Table 1: Percentages of girls and boys reporting history of abuse

History of Abuse	Girls % Reporting	Boys
None	66	83
Physical abuse	11	12
Sexual abuse	9	2
Combined abuse	15	3

Source: 1995 Washington State Survey of Adolescent Health Behaviors

Child Abuse (from page 1)

For More Information

Contact Dr. Lillian Bensley at the DOH Office of Epidemiology, 360-236-4248, or by e-mail: lsb0303@doh.wa.gov; or refer to the following publications:

Bensley LS, Van Eenwyk J, Spieker SJ, Schoder J: Self-reported abuse history and adolescent problem behaviors I: Antisocial and suicidal behaviors. *J Adolesc Health* 1999; 24:16-172.

Bensley LS, Spieker SJ, Van Eenwyk J, Schoder J: Self-reported abuse history and adolescent problem behaviors II: Alcohol and drug use. *J Adolesc Health* 1999; 24:173-180.

behaviors. Students who reported combined abuse had more than four times the risk of reporting suicidal thoughts, more than a sixfold risk of reporting a suicide plan, a 12-fold risk of reporting a noninjurious suicide attempt, and a 47-fold risk of reporting an injurious suicide attempt compared to students who reported no abuse.

Antisocial behavior included the following: carried a handgun, sold illegal drugs, stole or tried to steal a motor vehicle such as a car or motorcycle, was arrested, or took a handgun to school. Again, after data analyses were controlled for grade and gender, abused students were more likely to report antisocial behavior, and the increased risk was greatest for combined abuse and multiple antisocial behaviors (Figure 1). Students who reported combined abuse had more than three times the risk of one antisocial behavior and more than a seven-fold increase in risk of two or more antisocial behaviors in the past year.

Alcohol and drug use was categorized as light/moderate or heavy. Child abuse history was most strongly associated with drinking at the earlier ages. A data analysis that controlled for gender revealed that eighth-graders who reported combined abuse had an almost eight-fold risk and tenth-graders a three-fold risk of heavy drinking compared to those who reported no abuse. This association was not found for twelfth-graders. Unlike the students in

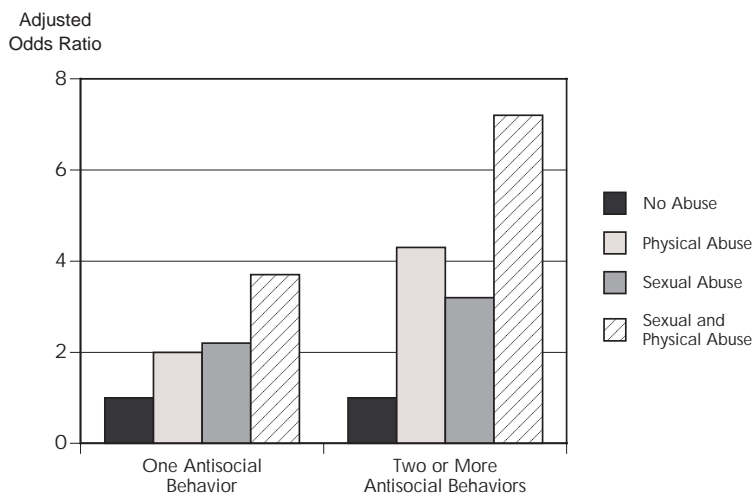
Abuse Reported by Adults and Teens

A comparison of the 1995 Adolescent Survey with a 1997 survey of adults in Washington State, the Behavioral Risk Factor Survey, showed similar responses for males, with none of the estimates of abuse differing by more than 3% between the two age groups. The responses for females were similar for sexual abuse, but adolescent girls were more than twice as likely as the grown women to report having been physically abused; 26% of the girls reported physical or combined abuse compared to 11% of the women. These comparisons might reflect an increase in rates of abuse over time, differences in perceptions related to age, or an increased sensitivity to violence against women in recent years. Other comparison studies would be needed to assess reliability of these findings.

earlier grades, even nonabused twelfth-graders were likely to drink. For both alcohol use at younger ages and drug use, the associations with abuse were stronger for heavy than for light/moderate usage, possibly because factors such as peer pressure were more relevant to light/moderate usage.

These findings indicate that consideration of the possibility of abuse is important in efforts to prevent or remediate the more serious problem behaviors manifested by teens. Effective intervention may also require involvement of the parent. In some cases abuse may be continuing and require protection of the teen. ♦

Figure 1: Abuse is associated with antisocial behavior



Salmonella (from page 1)

Sun Orchard is now pasteurizing all its orange juice.

Salmonella bacteria are a common cause of food-borne illness, with symptoms of diarrhea, stomach cramps, vomiting, dehydration, and fever within six to 72 hours of ingesting contaminated food. Symptoms usually abate in a few days and the illness is rarely fatal, although young children, the elderly, and those chronically ill are at greatest risk for serious complications.

Most large outbreaks are traced to poor preparation of food served at social gatherings, such as undercooked dishes containing meat or eggs. *Salmonella* outbreaks due to commercial products are unusual, but have been associated with products such as toasted cereal, ice cream, and alfalfa sprouts.

Monthly Surveillance Data by County

June 1999* – Washington State Department of Health

County	E. coli O157:H7	Salmonella	Shigella	Hepatitis A	Hepatitis B	Non-A, Non-B Hepatitis	Meningococcal Disease	Pertussis	Tuberculosis	Chlamydia	Gonorrhea	AIDS	Pesticides†	Lead\$#
Adams	0	0	0	0	0	0	0	0	0	3	0	0	2	0/0
Asotin	0	0	0	0	0	0	0	0	0	7	0	0	0	0/#
Benton	0	0	0	0	0	0	0	0	0	29	3	1	4	0/12
Chelan	0	3	0	0	0	0	0	0	0	10	0	0	5	1/#
Clallam	0	1	0	0	0	0	0	0	0	3	0	0	0	0/0
Clark	1	12	0	5	0	0	2	4	2	52	8	0	4	0/0
Columbia	0	0	0	0	0	0	0	0	0	1	0	0	1	0/0
Cowlitz	0	0	0	1	2	0	0	0	2	18	1	0	0	2/14
Douglas	0	0	0	0	0	0	0	0	0	5	0	0	2	0/0
Ferry	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Franklin	0	0	0	0	0	0	0	0	0	25	1	0	2	0/12
Garfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Grant	0	1	0	0	0	0	0	0	0	21	2	0	4	0/#
Grays Harbor	0	0	0	0	0	0	0	1	1	14	1	0	0	0/#
Island	0	0	0	0	0	0	0	8	0	8	0	0	0	0/#
Jefferson	0	1	0	0	0	0	0	0	0	0	0	0	0	0/0
King	7	20	9	32	5	1	2	23	5	342	67	25	4	1/46
Kitsap	0	2	0	0	1	0	0	2	0	42	2	0	1	0/15
Kittitas	0	1	0	0	0	0	0	0	0	8	0	0	0	0/0
Klickitat	0	0	0	0	0	0	0	0	0	3	0	0	0	0/0
Lewis	0	1	0	1	0	0	0	0	1	4	0	0	0	0/0
Lincoln	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Mason	0	0	0	0	0	0	0	0	0	9	0	0	0	0/0
Okanogan	0	1	0	0	0	0	0	0	0	4	0	1	2	0/0
Pacific	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Pend Oreille	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Pierce	0	1	2	1	0	0	1	0	4	219	61	1	2	0/54
San Juan	0	0	0	0	0	0	0	0	0	3	0	0	0	0/0
Skagit	1	1	0	0	0	0	2	0	2	29	2	0	2	0/7
Skamania	0	0	0	1	0	0	0	0	1	3	0	0	0	0/0
Snohomish	3	8	0	13	1	0	0	7	5	59	9	0	2	0/#
Spokane	0	2	1	0	0	0	0	1	1	72	8	1	3	2/12
Stevens	0	0	0	0	0	0	0	0	0	4	0	0	0	0/0
Thurston	0	5	0	2	0	0	0	0	1	24	3	0	2	0/#
Wahkiakum	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Walla Walla	0	1	0	0	0	0	0	5	0	11	0	0	0	0/5
Whatcom	0	1	0	0	0	0	0	1	0	23	2	0	0	0/#
Whitman	0	0	0	0	0	0	0	0	0	1	0	0	0	0/#
Yakima	1	3	2	0	0	0	0	11	0	83	2	1	10	0/7
Unknown														0/0

Current Month	13	65	14	56	9	1	7	63	25	1141	172	31	52	6/202
June 1998	5	50	9	181	14	0	10	16	23	775	144	56	65	10/228
1999 to date	29	220	52	163	33	8	38	501	126	5952	1034	179	125	56/1702
1998 to date	25	177	56	567	52	10	41	139	121	5284	899	219	187	68/1807

* Data are provisional based on reports received as of June 30, unless otherwise noted.

† Unconfirmed reports of illness associated with pesticide exposure.

\$# Number of elevated tests (data include unconfirmed reports) / total tests performed (not number of children tested); number of tests per county indicates county of health care provider, not county of residence for children tested; # means fewer than 5 tests performed, number omitted for confidentiality reasons.



WWW Access Tips

For *Salmonella* updates, check the Public Health Seattle and King County Web site at: <<http://www.metrokc.gov/health>>.

The National Clearinghouse on Child Abuse and Neglect provides information at: <<http://www.calib.com/nccanch>>.

epiTRENDS Is Now Published Bimonthly

epiTRENDS is moving to a bimonthly publication schedule, so you will receive future issues in September, November, January, March, and May. The monthly surveillance data will be posted on the DOH Web page at <http://www.doh.wa.gov>. We thank the Centers for Disease Control and Prevention for the grant that supported production of *epiTRENDS* from 1996 through June 1999.

Statewide Survey Will Assess Eligibility for Free Vaccines

August is the month for a statewide benchmarking project to document the percentage of Washington children who are eligible to receive free vaccines under the federal Vaccines for Children (VFC) program. This first-of-its-kind documentation project, mandated by the Centers for Disease Control and Prevention, is critical because the data collected are essential to justify current and future federal vaccine funding. To ensure accuracy of the benchmarking effort, all public and private health care providers receiving state-purchased vaccines will be required to participate.

Congress implemented the VFC program in 1994 to provide free vaccine to the nation's eligible children from birth through 18 years of age, including those who are uninsured or underinsured, those enrolled in Medicaid, and American Indians and Alaska Natives. VFC-eligible children represent an estimated 48% of children in Washington State. The remaining 52% receive free vaccine purchased primarily with state funds and other federal funds.

The percentage of VFC-eligible children in Washington is likely higher than the estimated 48%. Thus, documenting VFC

eligibility through benchmarking surveys may result in a corresponding increase in VFC-provided vaccine, which would free state dollars and other federal funds for the purchase of new vaccines for all children.

The Department of Health Immunization Program has worked with health care providers, provider organizations, local health jurisdictions (LHJs), and others to develop the benchmarking plan. The parent or guardian of every child receiving a vaccine during August will complete a simple, half-page check-off survey that asks the child's date of birth, if he or she is an American Indian/Alaska Native, Medicaid enrolled, has no insurance coverage, has insurance that does not cover the immunization, or has private insurance. The survey is available in six languages including English, Spanish, Cambodian, Vietnamese, Korean, and Russian. The LHJs will collect the surveys and send them to DOH for data entry and analysis; individual names will be deleted from the database.

For questions about the benchmarking survey, please contact your local public health jurisdiction or Tawney Harper, DOH Immunization Program, at 360-236-3512.

Conferences and Meetings

October 4-6
Spokane

The 6th Annual Joint Conference on Health — *Connecting Science and Practice for Healthy People, Healthy Communities*. The program features concurrent track keynote addresses on data use, environmental health, epidemiology, and health promotion. For details visit the WSPHA website: www.business-link.com/wspha or contact the conference coordinator, Kay DeRoos, at: 206/362-4728; fax: 206/362-4587; or e-mail: dero101w@cdc.gov.

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